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**PATENT APPLICATION**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re application of

Docket No: Q63182

Hyun-Sook KANG, et al.

Appln. No.: 09/915,766

Group Art Unit: 2686

Confirmation No.: 7463

Examiner: Willie J. DANIEL, Jr.

Filed: July 27, 2001

For: **METHOD FOR ALLOCATING BANDWIDTH IN A WIRELESS LOCAL AREA  
NETWORK AND APPARATUS THEREOF**

**SUBMISSION OF APPEAL BRIEF**

**MAIL STOP APPEAL BRIEF - PATENTS**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

Submitted herewith please find an Appeal Brief. A check for the statutory fee of \$500.00 is attached. The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account. A duplicate copy of this paper is attached.

Respectfully submitted,

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Registration No. 52,778

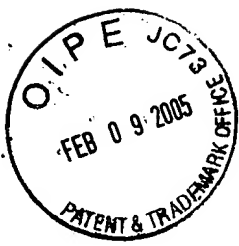
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WASHINGTON OFFICE

**23373**

CUSTOMER NUMBER

Date: February 9, 2005



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NETWORK AND APPARATUS THEREOF

**APPEAL BRIEF UNDER 37 C.F.R. § 41.37**

**MAIL STOP APPEAL BRIEF - PATENTS**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 41.37, Appellant submits the following:

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**I. REAL PARTY IN INTEREST**

Based on the information supplied by the Appellants, and to the best of Appellants' legal representative's knowledge, the real party in interest is the assignee, SAMSUNG ELECTRONICS CO., LTD. The Assignment was recorded on November 2, 2001 at Reel 012296, Frame 0233.

## **II. RELATED APPEALS AND INTERFERENCES**

Appellants, as well as Appellants' assigns and legal representatives, are unaware of any appeals or interferences which will be directly affected by, or which will directly affect or have a bearing on, the Board's decision in the pending case.

### **III. STATUS OF CLAIMS**

Claims 1-10 are pending in the application, have been fully rejected, and are the subject of this appeal. Claims 1-10, as finally rejected, are set forth in the Appendix.

Claims 1, 5, 6, and 10 stand rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Bauchot (U.S. Patent No.: 5,970,602). Claims 2, 4, 7, and 9 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Bauchot in view of Kalliokulju et al. (U.S. Patent No.: 6,553,006). Claims 3 and 8 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Bauchot in view of Kalliokulju and Montpetit (U.S. Patent No.: 6,366,761).

**IV. STATUS OF AMENDMENTS**

No amendments have been filed subsequent to the final office action.

**V. SUMMARY OF THE CLAIMED SUBJECT MATTER**

An exemplary embodiment of the present invention provides a method for allocating bandwidth in a wireless Local Area Network having an Access Point and at least one wireless communication terminal, including the steps of: (a) the Access Point allocating a fixed bandwidth to at least one wireless communication terminal (Fig. 4 (S102), page 7, lines 15-16); (b) receiving a transmission rate corresponding to a desired Contention Free Period of data to be transceived from at least one wireless communication terminal (Fig. 4 (S108), page 7, lines 19-22); and (c) adjusting a rate of Contention Free Period occupancy of at least one wireless communication terminal in the fixed bandwidth, based on the received transmission rate (Fig. 4, (S120), page 8, lines 17-19). *See also independent claim 1.*

Another exemplary embodiment of the present invention provides an apparatus for allocating bandwidth in a wireless Local Area Network, including at least one wireless communication terminal, comprising: bandwidth fixing means (31, Fig. 5) for fixing bandwidth to be allocated to at least one wireless communication terminal (page 10, lines 1-2); transmission rate receiving means (32, Fig. 5) for receiving a transmission rate of said at least one wireless communication terminal from at least one wireless communication terminal, if said at least one wireless communication terminal is intended for a data transmission through a Contention Free Period (page 10, lines 2-3); and period adjusting means (33, Fig. 5) for adjusting a rate of a Contention Free Period occupancy of said at least one wireless communication terminal in the bandwidth, based on the received transmission rate (page 10, lines 4-6). *See also independent claim 6.*

**VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

1. Claims 1, 5, 6, and 10 stand rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Bauchot.
2. Claims 2, 4, 7, and 9 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Bauchot in view of Kalliokulju.
3. Claims 3 and 8 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Bauchot in view of Kalliokulju and Montpetit.



## VII. ARGUMENT

Appellants respectfully request that the Board reverse the Examiner's rejections for the reasons set forth below.

A. *Claims 1, 5, 6 and 10 are Not Anticipated by Bauchot.*

A.1. Bauchot does not teach or suggest at least "receiving a transmission rate corresponding to a desired Contention Free Period of data to be transceived from said at least one wireless communication terminal," as recited in independent claim 1 and similarly recited in independent claim 6 (as well as dependents).

With respect to the limitation quoted in the sub-heading above, the Examiner appeared to allege on page 4, paragraph (b) of the Office Action dated February 26, 2004, that receiving a transmission rate would inherently relate to a mobile terminal request corresponding to a particular bandwidth.

In the *Response to Arguments* section, on page 11 of the Office Action dated August 9, 2004, the Examiner alleges, with respect to claim 1:

The applied reference Bauchot teaches of transmitting *bandwidth* reservation requests for UP\_RESERVED (or Contention Free Period) of data transfer (see col. 6, lines 29-67) for allocation of bandwidth by the Access Point to the mobile terminals Bandwidth directly relates to transmission rate or baud rate for data transfer which is the reasoning for inherency, where in the art bandwidth is measured in - cycles per second (hertz) or bits per second (bps). The bandwidth is the rate at which the data is transferred between the Access Point and mobile terminals.

Appellants submit that Bauchot does not expressly or inherently disclose the claimed "receiving a transmission rate..." limitation. Assuming, *arguendo*, that Bauchot teaches

transmitting bandwidth reservation requests for an UP\_RESERVED period (or Contention Free Period), -such transmission of bandwidth reservation request does not necessarily involve the receipt of a transmission rate corresponding to a desired contention free period of data. A reservation request, as set forth in Bauchot, could involve simply requesting a reservation without the transmission of a transmission rate. Therefore, even though bandwidth relates to transmission rate or baud rate, a transmission of a bandwidth reservation request does not inherently teach or suggest receiving a transmission rate corresponding to a desired contention free period of data, as set forth in claim 1.

Independent claim 6 is patentable for reasons similar to those set forth above with respect to claim 1. Dependent claims 5 and 10 are patentable at least by virtue of their respective dependencies from independent claims 1 and 6.

A.2. Bauchot does not teach or suggest at least, “adjusting a rate of Contention Free Period occupancy of said at least one wireless communication terminal in the fixed bandwidth, based on the received transmission rate,” as recited in claim 1 and similarly recited in claim 6 (as well as dependents).

The Examiner cites col. 6, lines 34-40, col. 8, lines 14-20, and col. 9, lines 30-48 in the previous Office Actions, to support the assertion that the above-quoted step of claim 1 (in sub-heading) is disclosed in Bauchot. However, nowhere does Bauchot even mention adjusting a rate of Contention Free Period occupancy of the terminal in the bandwidth, based on the received transmission rate. Yet further, nowhere does Bauchot even mention that an adjustment is made to anything related to a Contention Free Period occupancy. Therefore, at least based on the

foregoing, Appellants submit that independent claim 1 is patentably distinguishable over Bauchot.

Further, Appellants submit that Bauchot does not teach or suggest accessing a rate of contention free period occupancy of said at least one wireless communication in the fixed bandwidth, based on the received transmission rate, because Bauchot does not even teach or suggest receiving a transmission rate.

Appellants submit that dependent claim 5 is patentable at least by virtue of its dependency from independent claim 1.

Appellants submit that claim 6 is patentable for reasons similar to those set forth above with respect to claim 1. With respect to dependent claim 10, Appellants submit that this claim is patentable at least by virtue of its dependency from independent claim 6.

*B. Claims 2, 4, 7 and 9 would NOT have been obvious, within the meaning of §103(a), over Bauchot and Kalliokulju.*

First, Appellants submit that dependent claims 2, 4, 7 and 9 are patentable at least by virtue of their respective dependencies from independent claims 1 and 6. Kalliokulju does not make up for the deficiencies of Bauchot.

Also, Appellants submit that one skilled in the art would NOT have been led to combine Bauchot with Kalliokulju, to arrive at the present invention. That is, Bauchot is directed to establishing wireless access to an ATM network, while, on the other hand, Kalliokulju is directed to data transmission connection between a wireless communication device and a mobile

communication network. Nowhere does Kalliokulju even mention asynchronous transfer mode (ATM) or this type of network in its disclosure. Therefore, because the inventions of the two different references relate to two different types of environments, Appellants submit that one skilled in the art would not have been led to combine the disclosure of one reference with the other.

In response to the argument above, the Examiner submitted new arguments in numbered paragraph 10 on page 13 of the Office Action dated August 9, 2004. Here, the Examiner appears to believe that Appellants were simply attacking the applied references individually on page 10 of the Amendment filed on May 24, 2004. However, Appellants submit that such is not the case. In the paragraph on page 10 of the May 24<sup>th</sup> Amendment that discussed the lack of teaching, suggestion or motivation to combine the references, the individual references were only mentioned to show their teachings, and to show that the applied references relate to two different types of environments, such that one skilled in the art would not have been led to combine one with the other.

Therefore, at least based on the foregoing, Appellants submit that claims 2, 4, 7 and 9 are patentable over Bauchot and Kalliokulju.

*C. Claims 3 and 8 would NOT have been obvious, within the meaning of §103(a), over Bauchot, Kalliokulju, and Montpetit*

First, Appellants submit that dependent claims 3 and 8 are patentable at least by virtue of their respective dependencies from independent claims 1 and 6, respectively. The secondary references do not make up for the deficiencies of Bauchot.

Further, Appellants submit that one skilled in the art would NOT have been led to combine Bauchot with Kalliokulju, for the reasons set forth in the section above. Furthermore, Appellants submit that one skilled in the art would NOT have been led to combine Montpetit with Bauchot and/or Kalliokulju, absent impermissible hindsight reasoning in view of the present application. That is, Montpetit is directed to a data communication system and method that allocates an amount of bandwidth to a ground terminal for uplink transmission of one or more data packets in a low-Earth-orbit (LEO) satellite data communication network. In comparison, the other applied references, Bauchot and Kalliokulju, do not even mention or contemplate data communications in a satellite data communication network. Therefore, because the applied references are each directed to different types of communications networks that have unrelated issues and problems that need to be overcome, Appellants submit that one skilled in the art would NOT have been led to combine the references that are applied against the claimed invention.

Therefore, at least based on the foregoing, Appellants submit that claims 3 and 8 are patentably distinguishable over the applied references, either alone or in combination.

*D. Conclusion*

Appellants submit that, at least based on the foregoing, the present invention, as recited in each of claims 1-10, is patentably distinguishable over the applied references either alone or in combination. Appellants therefore request that the Board reverse the Examiner's rejections.

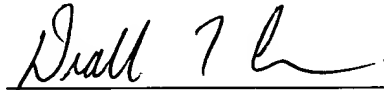
Unless a check is submitted herewith for the fee required under 37 C.F.R. §41.37(a) and 1.17(c), please charge said fee to Deposit Account No. 19-4880.

**APPEAL BRIEF Under 37 C.F.R. § 41.37**  
**U.S. APPLICATION NO. 09/915,766**

**ATTORNEY DOCKET NO. Q63182**

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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WASHINGTON OFFICE

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**CLAIMS APPENDIX**

**CLAIMS 1-10 ON APPEAL:**

1. A method for allocating bandwidth in a wireless Local Area Network having an Access Point and at least one wireless communication terminal, comprising the steps of:
  - (a) the Access Point allocating a fixed bandwidth to said at least one wireless communication terminal;
  - (b) receiving a transmission rate corresponding to a desired Contention Free Period of data to be transceived from said at least one wireless communication terminal; and
  - (c) adjusting a rate of Contention Free Period occupancy of said at least one wireless communication terminal in the fixed bandwidth, based on the received transmission rate.
2. The method of claim 1, wherein the data is real time data.
3. The method of claim 1, wherein in the step (a), the fixed bandwidth is a sum of the Contention Free Period for real time data transmitting/receiving, and a Contention Period for non-real time data transmitting/receiving.
4. The method of claim 1, wherein in the step (b), the transmission rate received from said at least one wireless communication terminal comprises a data packet length and a data transmission speed.
5. The method of claim 1, wherein the step (c) comprises the steps of:
  - calculating a Contention Free Period occupancy requested by said at least one wireless communication terminal;

accepting the Contention Free Period occupancy as a current Contention Free Period occupancy, if the Contention Free Period occupancy requested by said at least one wireless communication terminal does not exceed a Contention Free Period occupancy limit; and

associating said at least one wireless communication terminal to the Access Point after adjusting a ratio of the Contention Free Period to Contention Period, if a sum of the current Contention Free Period occupancy is less than a maximum Contention Free Period.

6. An apparatus for allocating bandwidth in a wireless Local Area Network, including at least one wireless communication terminal, comprising:

bandwidth fixing means for fixing bandwidth to be allocated to said at least one wireless communication terminal;

transmission rate receiving means for receiving a transmission rate of said at least one wireless communication terminal from said at least one wireless communication terminal, if said at least one wireless communication terminal is intended for a data transmission through a Contention Free Period; and

period adjusting means for adjusting a rate of a Contention Free Period occupancy of said at least one wireless communication terminal in the bandwidth, based on the received transmission rate.

7. The apparatus of claim 6, wherein the data is real time data.

8. The apparatus of claim 6, wherein the bandwidth is a sum of the Contention Free Period for real time data transmitting/receiving, and a Contention Period for non-real time data transmitting/receiving.



9. The apparatus of claim 6, wherein the transmission rate received from said at least one wireless communication terminal is a data packet length and a data transmission speed.

10. The apparatus of claim 6, wherein the period adjusting means comprises:  
calculating means for calculating the Contention Free Period occupancy requested by said at least one wireless communication terminal, based on the received transmission rate;  
accepting means for accepting the requested Contention Free Period occupancy as a current Contention Free Period occupancy, if the Contention Free Period occupancy requested by said at least one wireless communication terminal does not exceed a Contention Free Period occupancy limit; and

association means for associating the terminal to an Access Point after adjusting a ratio of the Contention Free Period to Contention Period, if a sum of the current Contention Free Period occupancy is less than a maximum Contention Free Period.